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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,848	11/18/2003	Koji Maekawa	8014-1071	3156

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EXAMINER	
NGUYEN, CHAU N	

ART UNIT	PAPER NUMBER
2831	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/714,848	MAEKAWA ET AL.	
	Examiner	Art Unit	
	Chau N. Nguyen	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 4-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 4-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1, 4, 8 and 13 are objected to because of the following informalities:

in claim 1, line 9, after "formed" insert --by--,

in claim 4, line 10, after "formed" insert --by--,

in claim 8, line 12, after "formed" insert --by--,

in claim 13, lines 2-3, the recitation of "a part of an exterior surface of the conductor directly contacts the center core" is unclear since the exterior surface of the conductor 22 or 32 faces away from the center core. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the

subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 and 4-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Figures 1-3 of Applicant's Admitted Prior Art (AAPA) in view of Taylor et al. (5,430,256).

Figures 1-3 of AAPA discloses an electric cord comprising a first end which electrically connects to a vibrator, a second end which is an input terminal to which a drive signal for driving the vibrator is inputted (see specification, page 1 line 18 through page 2 line 9), wherein the electric cord is formed between the first end and the second end by a plurality of wire rods (1b), the plural wire rods at least one of twisted, woven, and bundled together, each of the wire rods (1b) is formed by a plurality of wires (1a), the plural wires (1a) at least one of twisted, woven, and bundled together, each of the wires (1a) comprises a plurality of uninsulated core threads (11) and a conductor (12) wound on the core threads, and the plurality of

wires flow the same electric current. Figures 1-3 of AAPA also discloses the conductor being a rectangular conductor having a rectangular section (re claims 5, 6, and 12), the cord being an electric cord which is used as a signal input line for a voice coil (re claim 7), the interior surface of the conductor directly contacting the center core (re claim 13), and the wire rods being positioned adjacent and being bundled together (re claim 14).

Figures 1-3 of AAPA does not disclose the surface of the conductor (12) (re claims 1, 8 and 9) or the external side of the conductor (re claim 4) being covered with an insulator so that the respective wires (1a) are electrically insulated from each other. Taylor et al. discloses an electric cord (Figs 1-2) comprising a plurality of conductors (10), wherein the surface of each conductor is covered with an insulator (12) so that respective conductors (10) are electrically insulated from each other. Taylor et al. discloses that in the case of an uninsulated multistranded conductor of the known art, the fact of its uninsulation causes it to behave as though it is a solid conductor of a given overall gauge, and the audio signal is subjected to skin effect resulting in a negative alteration of the audio signal. Furthermore, uninsulated stranded conductors are subject to the effects of the corrosive atmosphere. As the wires aged, the audio signal is deteriorated (col. 1, lines 53-63).

Accordingly, it would have been obvious to one skilled in the art to apply the teaching of Taylor et al. in the electric cord of Figures 1-3 of AAPA by covering the surface of the conductor (12) of each wire (1a) with an insulator to improve the signal transmission and to protect the conductor as taught by Taylor et al. It would also have been obvious to one skilled in the art to use enamel as the insulator for the modified electric cord of Figures 1-3 of AAPA since enamel is well-known in the art for being used to cover electric conductor (re claim 10).

The modified Figures 1-3 of AAPA also discloses the insulator covering an entire exterior surface of the conductor (re claim 11), the insulator covering the first wire directly contacting the insulator covering the second wire (re claim 15), at one end of the wire rods for attachment to an input terminal of a frame associated with a voice coil (re claim 16), the insulator being a resin (re claim 17), there being three rods positioned adjacent each other and electrically isolated from each other, and the three wires positioned adjacent each other to form a wire rod (re claim 18), and a minimum unit of each wire being the core thread (re claim 19).

Response to Arguments

4. Applicant's arguments filed 12/27/2005 have been fully considered but they are not persuasive.

Applicant argues that even granted the insulated wire (10) in Taylor corresponds to each of the wires (2a) of AAPA, Taylor does not disclose any conductor that corresponds to the conductor (22) in claim 1 which winds core threads (21). That is, Taylor does not disclose the surface of a conductor being covered with an insulator. These arguments are not found persuasive. If applicant agrees that the insulated wire (10) of Taylor corresponds to each wire (2a) of AAPA, then applicant can see that the surface of the conductor (10) of Taylor is covered with an insulator (12). Taylor is relied upon only to support the position of providing an insulator around each conductor, in a bundle of uninsulated conductors, to improve the signal transmission and to protect the conductor. Accordingly, Taylor does not have to disclose the conductor being the one winding around core threads, which is already disclosed in Figures 1-3 of AAPA.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chau N Nguyen
Primary Examiner
Art Unit 2831